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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/662,392	09/14/2000	Raymond P. Mariella JR.	IL-10560	1299

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EXAMINER

CONLEY, SEAN E

ART UNIT

PAPER NUMBER

1744

DATE MAILED: 01/29/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

MF-4

Office Action Summary

Application No.

09/662,392

Applicant(s)

MARIELLA, RAYMOND P.

Examiner

Sean E Conley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Regarding claims 2, 3, 5, 12, 13, 15, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).
3. Claim 6 recites the limitation "said circulation system". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily

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published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Berry (U.S. Pat. 6,293,861).

Berry discloses an automatic response building defense system which releases a treatment in response to a hazardous agent detected inside the building. The system detects the unwanted agents in the air using sensors placed throughout the building and has a control system that responds to the detection of the agents in the air by releasing a treatment aerosol. The biological and chemical sensors are placed in all areas inside the building (see column 1, line 45 to column 2, line 56).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
8. Claims 6 and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mascolo et al. (U.S. Pat. 5,078,046) in view of Berry.

Mascolo et al. discloses an air treatment apparatus for cleaning the air in a forced air circulation system. The apparatus periodically supplies an atomized treating liquid into the moving air stream to remove chemicals (see column 1, lines 5-10 and column 2, lines 5-40). However, the invention does not teach detecting and identifying the chemicals in the air and also does not teach a control system that responds to the detection with a treatment chemical.

Berry discloses an automatic response building defense system which releases a treatment in response to a hazardous agent detected inside the building. The system detects the unwanted agents in the air using sensors placed throughout the building and has a control system that responds to the detection of the agents in the air by releasing a treatment aerosol. The biological and chemical sensors are placed in all areas inside the building (see column 1, line 45 to column 2, line 56).

It would have been obvious to one of ordinary skill in the art to include the step of stopping the circulation of the air if the treatment system shuts down because treated air would no longer be circulating throughout the system.

Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Mascolo et al. and replace the treatment means in the air circulation system with the means of Berry (a pathogen detector/identifier/treatment autonomous apparatus) for the purpose of detecting and

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removing contaminants in response to the detection of pathogens in a forced air circulation system.

9. Claims 2, 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berry in view of Groger et al. (U.S. Pat. 5,766,956).

Berry discloses an automatic response building defense system which releases a treatment in response to a hazardous agent detected inside the building. The system detects the unwanted agents in the air using sensors placed throughout the building and has a control system that responds to the detection of the agents in the air by releasing a treatment aerosol. The biological and chemical sensors are placed in all areas inside the building (see column 1, line 45 to column 2, line 56).

However, Berry does not teach specifically using antibody based immunoassays or nucleic-acid based assays for the detection of pathogens. However it is disclosed that the sensors detect and identify biological and chemical agents present in the air (see column 3, lines 7-22).

Groger et al. discloses in column 1, lines 8-62, that existing biosensors are based on antibody-antigen and nucleic acid-analyte methods. These biosensors are used to detect micro-organisms and toxins considered for use in biological warfare by terrorists.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the sensing means of Berry with biosensors based on antibody-antigen and nucleic acid-analyte methods taught by Groger et al. for

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the purpose of detecting biological or chemical toxins present in the air contained inside a building.

10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berry and in view of Anbar (U.S. Pat. 4,022,876).

Berry discloses an automatic response building defense system which releases a treatment in response to a hazardous agent detected inside the building. The system detects the unwanted agents in the air using sensors placed throughout the building and has a control system that responds to the detection of the agents in the air by releasing a treatment aerosol. The biological and chemical sensors are placed in all areas inside the building (see column 1, line 45 to column 2, line 56). However, Berry does not teach specifically using mass spectrometric-based assays for the detection of pathogens. However it is disclosed that the sensors detect and identify biological and chemical agents present in the air (see column 3, lines 7-22).

Anbar discloses that a mass spectrometric-based assay is used when determining the amount of bound antigen-antibodies which can be used to identify and detect the type of chemical agent and amount present in the air being treated.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the sensing means of the modified invention to Mascolo et al. with mass spectrometric-based assays as taught by Anbar for the purpose of detecting biological or chemical toxins present in the air contained inside a building.

11. Claims 12, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mascolo et al. in view of Berry as applied to claim 11 and further in view of Groger et al.

Mascolo et al. and Berry do not teach specifically using antibody based immunoassays or nucleic-acid based assays for the detection of pathogens. However, Berry discloses that the sensors detect and identify biological and chemical agents present in the air (see column 3, lines 7-22).

Groger et al. discloses in column 1, lines 8-62, that existing biosensors are based on antibody-antigen and nucleic acid-analyte methods. These biosensors are used to detect micro-organisms and toxins considered for use in biological warfare by terrorists.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the sensing means of the modified invention to Mascolo et al. with biosensors based on antibody-antigen and nucleic acid-analyte methods taught by Groger et al. for the purpose of detecting biological or chemical toxins present in the air contained inside a building.

12. Claim 14 rejected under 35 U.S.C. 103(a) as being unpatentable over Mascolo et al. in view of Berry as applied to claim 11 above and further in view of Anbar.

Mascolo et al. and Berry do not teach specifically using mass spectrometric-based assays for the detection of pathogens. However, Berry discloses that the

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sensors detect and identify biological and chemical agents present in the air (see column 3, lines 7-22).

Anbar discloses that a mass spectrometric-based assay is used when determining the amount of bound antigen-antibodies which can be used to identify and detect the type of chemical agent and amount present in the air being treated.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the sensing means of the modified invention to Mascolo et al. with mass spectrometric-based assays as taught by Anbar for the purpose of detecting biological or chemical toxins present in the air contained inside a building.

13. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mascolo et al. in view of Berry as applied to claim 11 and further in view of Condit et al. (U.S. Pat. 5,938,823).

Mascolo et al. and Berry do not teach using an electrostatic precipitator to treat the air.

Condit et al. discloses an air cleansing apparatus which includes an electrostatic precipitator for treating the air. The electrostatic precipitator traps contaminants as the air passes through the device (see columns 1 and 2). Condit et al. does not teach a means to detect and identify the contaminants in the air and is only focused on treating the air.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to change the modified invention of Mascolo et al. and add an electrostatic precipitator in addition to the aerosol spray and filter treatment for the purpose of increasing the cleaning effect on the air by using an additional treatment means.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean Conley, whose telephone number is (703) 305-2430. The examiner can normally be reached on Monday-Friday 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Robert Warden, can be reached at (703) 308-2920. The Unofficial fax phone number for this group is (703) 305-7719. The Official fax phone number for this Group is (703) 305-5408.

When filing a FAX in Technology Center 1700, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communications with the PTO that are not for entry into the file of the application. This will expedite the processing of your papers.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [robert.warden@uspto.gov]. All Internet e-mail communications will be made of record in the application file. PTO employees will not

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communicate with applicant via internet e-mail where sensitive data will be exchanged or where there exists a possibility that sensitive data could be identified unless there is of record express waiver of the confidentiality requirements under 35 U.S.C. 122 by the applicant. See the Interim Internet Usage Policy published by the Patent and Trademark Office Official Gazette on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist, whose telephone number is (703) 308-0661.

SEC

January 14, 2002